



*REPORT TO THE CONGRESS*

Savings Possible By Buying  
Automatic Data Processing  
Equipment Or By Leasing It  
From Commercial Leasing Firms

B-114829

Government Printing Office

*BY THE COMPTROLLER GENERAL  
OF THE UNITED STATES*

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COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON D C 20548

B- 114829

To the President of the Senate and the  
Speaker of the House of Representatives

This is our report on savings possible at the Government  
Printing Office by buying automatic data processing equipment  
or by leasing it from commercial leasing firms

Our review was made pursuant to the Budget and Ac-  
counting Act, 1921 (31 U S C 53), the Accounting and Auditing  
Act of 1950 (31 U S C 67), and the Legislative-Judiciary  
Appropriation Act, 1954 (44 U S C 309)

Copies of this report are being sent to the Director,  
Office of Management and Budget, the Public Printer, and  
the Chairman, Joint Committee on Printing

A handwritten signature in cursive script, reading "Thomas B. Staats", is positioned above the printed name of the Comptroller General.

Comptroller General  
of the United States

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## ABBREVIATIONS

ADP	automatic data processing
GAO	General Accounting Office
GPO	Government Printing Office
GSA	General Services Administration
IBM	International Business Machines Corporation

## D I G E S T

### WHY THE REVIEW WAS MADE

The Government Printing Office has been meeting its needs for automatic data processing (ADP) equipment by leasing it from the manufacturer. The General Accounting Office (GAO) made this review to determine whether there were more economical alternatives for acquiring such equipment and, if so, whether they had been considered by the Printing Office.

### FINDINGS AND CONCLUSIONS

Although purchasing ADP equipment is often more economical than leasing, the Printing Office said purchasing was not feasible for it because of uncertainties as to its future equipment needs. GAO believes that, if purchase is not feasible, the Printing Office can still reduce rental costs by leasing its equipment from a commercial leasing firm rather than from the manufacturer.

For instance, GAO estimates the Printing Office could have saved about \$164,000 for a 1-year period, \$363,000 for a 2-year period, and \$1.2 million for a 5-year period if it had leased equipment from a commercial leasing firm similar to that it was leasing (or planned to lease) as of July 1, 1969. (See p. 10.)

Additional savings may result if the Printing Office can find a means of forecasting its long-term ADP equipment requirements and thus make it practicable to purchase the equipment. (See p. 13.)

In view of the financial advantages of leasing the equipment from commercial leasing firms or purchasing it if a sufficient retention period can be established, GAO believes that the continuation of the Government Printing Office's practice of leasing from the equipment manufacturer will result in additional costs and that steps should be taken to change this practice at the earliest practicable date.

### RECOMMENDATIONS OR SUGGESTIONS

GAO is recommending to the Public Printer that:

- Procedures be established to ensure that acquisitions of ADP equipment will be based on an adequate analysis of the merits of alternative sources of supply. (See p. 17.)
- ADP equipment requirements be reevaluated to determine whether reasonably accurate retention periods can be established for any of the ADP systems presently being leased from the manufacturer that would justify direct purchase of any of the equipment. (See p. 17.)
- Lease terms and ADP equipment available from commercial leasing firms be fully explored with a view toward leasing the equipment at the most economical and advantageous terms obtainable when the estimated retention period is not sufficient to justify the direct purchase. (See p. 17.)

### AGENCY ACTIONS AND UNRESOLVED ISSUES

The Government Printing Office told GAO that it had previously considered both purchasing equipment and leasing it from commercial leasing firms but that in most cases records were not retained showing the results of its evaluations. (See p. 6.)

Government Printing Office officials said the feasibility of purchasing ADP equipment or leasing it from a commercial leasing firm would be further investigated. Also, the Printing Office will consider and adequately document all pertinent factors in connection with its future acquisition of ADP equipment. (See p. 16.)

### MATTERS FOR CONSIDERATION BY THE CONGRESS

GAO believes that this report will be of interest to the Congress because of the significant savings that can be effected by leasing ADP equipment from commercial leasing firms or purchasing the equipment if sufficient retention periods can be established by the Government Printing Office.

## CHAPTER 1

### INTRODUCTION

The General Accounting Office has examined into the acquisition of automatic data processing equipment by the Government Printing Office (GPO), Washington, D.C. In making our examination, we compared the cost under GPO's existing practice of leasing ADP equipment from the manufacturer with the cost of (1) leasing equipment from a leasing firm and (2) purchasing equipment from the manufacturer. The scope of our review is described on page 19.

GPO is responsible for printing and binding work ordered by the Congress and the individual departments, independent establishments, and agencies of the Federal Government. In addition, GPO prints, for sale to the public, documents of general interest that are not confidential in nature.

In providing these services, GPO uses ADP equipment to process information for accounting and reporting requirements and to prepare information for electronic photocomposition. The ADP equipment in use at GPO consists of three IBM 360 computer systems leased from the manufacturer, International Business Machines Corporation (IBM).

A listing of the principal officials of GPO responsible for the administration of the activities discussed in this report is included as appendix IV.

### GOVERNMENT POLICY FOR THE ACQUISITION OF ADP EQUIPMENT

The General Services Administration (GSA), through Federal Property Management Regulations, and the Office of Management and Budget, through circulars and directives, have identified three methods of acquiring ADP equipment--purchase from the manufacturer, lease from the manufacturer, and lease from a commercial leasing firm other than the manufacturer. The estimated cost of each of these methods is discussed in chapter 3.

GSA is responsible by law (40 U.S.C. 759) for coordinating and providing for the ~~economic~~ purchase, lease, and maintenance of ADP equipment obtained by Federal agencies. In accordance with this responsibility, GSA has issued several bulletins advising the heads of Federal agencies of the desirability of considering leasing firms as a source for ADP equipment. GSA bulletin, Federal Property Management Regulation A-9, dated March 10, 1966, stated in an attachment that several leasing firms had offered short-term leasing proposals to the Government, which would produce savings of 10 to 50 percent of the IBM lease rates on similar ADP equipment. This bulletin stated also that the rights granted to the Government under these proposals would be at least equal to, and in some instances better than, those which were currently offered by IBM.

Subsequently, GSA bulletin, Federal Property Management Regulation E-27, dated September 15, 1966, advised the heads of Federal agencies that GSA was in the process of developing contract terms and specific guidelines to aid Federal agencies in dealing with leasing firms. This bulletin stated that, pending the accomplishment of these actions by GSA and after giving due consideration to the feasibility of purchasing ADP equipment, each Federal agency should proceed with the development of arrangements with leasing firms where it has been determined to be in the best interests of the Government.

Bureau of the Budget Circular No. A-54, as revised, dated June 27, 1967, requires Federal agencies to consider commercial leasing firms as a source of supply for ADP equipment. This requirement, together with the policies and guidance stated in applicable Bureau of the Budget directives, was extended to legislative branch agencies, such as GPO by Federal Property Management Regulation E-56, dated January 1969. Circular No. A-54, as revised, advises Federal agencies that most commercially available equipment can be acquired by purchase or lease from the equipment manufacturer or by lease from a commercial leasing firm. Guidelines for agency self-appraisal of practices in the management of ADP equipment are provided in Bureau of the Budget Circular No. A-61, dated August 3, 1963.



Under the existing policy, as stated in Bureau of the Budget Circulars Nos. A-54 and A-61, one of the requirements for purchasing ADP equipment is that the acquiring agency determined that it will retain the equipment beyond the break-even point (point in time when the accumulated rental costs equal, and thereafter exceed, the purchase price plus accumulated maintenance costs). Circular No. A-54 requires that each Federal agency give careful consideration to the relative merits of each potential source of supply and acquire its ADP equipment from the source which offers the greatest advantage to the Government. It requires also that the basis for the selection of the method of acquisition be adequately documented.

## CHAPTER 2

### ACQUISITION OF ADP EQUIPMENT BY GPO

GPO began its acquisition of the IBM 360 computer systems in April 1964 under a letter of intent to IBM to lease one 360 system, on the basis of the results of a GPO technical review and a decision to replace earlier model computers being leased from IBM. Although the letter of intent specified an IBM 360 model 50 (360/50) system, GPO accepted an IBM 360 model 40 (360/40) system because of its earlier availability. The major components of this system were installed at GPO by IBM in October 1965.

GPO's order for the 360/50 system remained in effect. In June 1967 the major components of this system were installed.

*no document for leasing*

GPO's decision to acquire the 360/40 and 360/50 systems was based upon its technical review made early in 1964 and updated in 1965 and 1966. Both systems were leased from IBM under the standard Government year-to-year lease with the usual purchase option. We were advised by GPO officials that the feasibility of purchasing the equipment had been studied and that leasing from a commercial leasing firm had been considered; however, GPO officials were unable to furnish us with any records of such a study.

*no document for leasing*

In June 1967 GPO decided to acquire another 360/50 system from the manufacturer. The major components for this system were installed in August 1969. For this acquisition, GPO provided us with a record of a study in which it compared the cost of leasing the system from IBM with the cost of purchasing it from IBM. The study, which covered a 2-year period, showed that the cost of purchasing exceeded the cost of leasing. GPO based its comparison on the 2-year period because it believed that the uncertainty as to the scope of its future data processing applications made it imprudent to make firm commitments for a longer period. GPO officials advised us that leasing from a commercial leasing firm had been considered, but they were unable to locate any supporting records. Our review of GPO's records revealed no evidence as to extent of the

consideration given to leasing from a commercial leasing firm.

GPO's inability to accurately forecast its long-range ADP requirements, together with the results of its 2-year purchase-versus-lease cost comparison appear to be the major reasons for GPO's decision to lease on a year-to-year basis the 360/50 system installed in August 1969. Although estimates of future ADP requirements were prepared by a committee established by GPO for that purpose, GPO management considered the estimates inadequate as a basis for purchasing the equipment, because possible changes in the quantity and type of work which would be processed in the future could require modification or replacement of the equipment. GPO officials advised us that they could not predict when these changes would occur.

At the completion of our fieldwork, GPO was leasing the three 360 computer systems from IBM at an annual lease cost of \$898,308.

It was not clear from GPO's records or from our discussions with GPO officials why formal records of lease-versus-purchase cost comparisons were not made and kept in connection with the decisions to lease the first two 360 systems. It is true that, at the time the decisions were made, it was not mandatory that legislative agencies prepare and document lease-versus-purchase cost comparisons in reaching decisions as to the method of acquiring computer systems. In this respect, the requirements contained in Bureau of the Budget Circulars Nos. A-54 and A-61 were not mandatory for legislative branch agencies until January 1969. Nonetheless, since the circulars indicated that significant savings could be obtained through purchase, we would have expected that such documentation would have been prepared and kept if for no reason other than to support the decisions to spend large sums on leasing when purchasing was indicated to be a more economical alternative in many cases.

In commenting on why the equipment was neither purchased nor leased from a commercial leasing firm, officials of GPO told us that they:

"\*\*\* could not reasonably predict the workload for electronic photocomposition; the pace and scope of other computer applications; the availability of space and manpower; the effect of advances in computer technology; the future needs for present operating requirements and limitations; and past experience involving a rapid turnover of computer equipment; and in view of this, purchase or long-term leasing from a commercial leasing firm were not considered to be feasible."

In addition, GPO officials stated that they:

"\*\*\* were fearful of the speculative and transitory nature of computer leasing firms, and were of the opinion that possible bankruptcy, policy changes, and failures to meet delivery schedules, and/or a failure to sustain a high degree of systems engineering, educational material, and around-the-clock maintenance and back-up support might have a serious and adverse effect on vital computer operations."

GPO officials told us also that, in the event of an untimely bankruptcy of a commercial leasing firm, there would be some question as to GPO's right and the possibility that GPO would be forced to take undesirable alternative courses of action which could interfere with its operations.

In our opinion, GPO's inability to predict the electronic photocomposition workload, together with the related uncertainties as to other computer applications, space, manpower, and computer technology, may be justification for not purchasing ADP equipment or entering into a long-term lease agreement but could hardly obviate the need to determine whether a short-term leasing arrangement from commercial leasing firms was available and feasible. Since short-term leases are available and will allow GPO to reduce its rental costs significantly (see p. 10), it is our view that GPO's inability to predict workload requirements is not relevant to a decision to lease this equipment from a commercial leasing firm. The other areas, such as computer applications, space, manpower, and technology, seem to be of equal

concern whether ADP equipment is leased from the manufacturer or from a commercial leasing firm.

With regard to the concern expressed by GPO officials as to "the speculative and transitory nature" of computer leasing firms, it should be noted that, in the event of financial difficulties of the lessor, the Government as lessee would have a contractual right to use the equipment during the period of the lease, including the period covered by any significant renewal options, regardless of whether the leasing firm became bankrupt or otherwise ceased operations.

Systems engineering, educational material, and other backup or technical support would have been available from IBM without charge prior to June 23, 1969, under leasing arrangements with a commercial leasing firm, provided that GPO was the first lessee of the specific items of equipment covered by the lease. Because of a policy change by IBM on June 23, 1969, the matter of technical support will not be a factor subsequent to that date, because all users of leased equipment will be charged for technical-support services.

Maintenance services by the manufacturer are available for equipment leased from commercial leasing firms, and the maintenance cost for the 40-, 75-, and 100-percent levels of utilization have been included in our computations of estimated savings. Round-the-clock maintenance for equipment acquired from commercial leasing firms is available, if necessary, at extra cost or can be accomplished by specific maintenance service calls, as needed, at times other than during the normal one-shift working hours.

We noted that the practice of leasing ADP equipment from commercial leasing firms had precedent in that certain other Government agencies had acquired ADP equipment by this method. Furthermore, this method has the sanction of GSA and the Office of Management and Budget, both of which require documentation by the agency supporting its selection of the method of acquisition.

## CHAPTER 3

### COST COMPARISONS

We estimated that GPO's future rental costs could be reduced by about \$164,000 over a 1-year period, about \$363,000 over a 2-year period, and about \$1.2 million over a 5-year period, if ADP equipment similar to that which GPO was leasing or planning to lease as of July 1, 1969, were leased from a commercial leasing firm. In addition, we observed that, although the potential savings could be even greater if the equipment were purchased from the manufacturer or acquired by a combination of leasing and purchasing, there was no assurance that these additional savings would be realized because GPO had been unable to establish long-term usage requirements for the equipment.

#### LEASING EQUIPMENT FROM COMMERCIAL LEASING FIRMS

Our comparison of the cost to lease ADP equipment from IBM with the cost to lease from commercial leasing firms showed that GPO could reduce its future expenditures substantially if equipment comparable to that which GPO was leasing or planning to lease as of July 1, 1969, were leased from a commercial leasing firm. Our comparison, based on an equipment utilization rate of 40 percent of available operational time, showed that savings would range from about \$164,000 if the equipment were retained for only 1 year to about \$1.2 million if it were retained for 5 years, as shown in the following tabulation.

	Cumulative costs and potential savings based upon 40-percent utilization				
	First year	Second year	Third year	Fourth year	Fifth year (note a)
Cost to lease from IBM	\$898,308	\$1,796,616	\$2,694,924	\$3,593,232	\$4,491,540
Cost to lease from commercial leasing firm (note b)	<u>734,661</u>	<u>1,433,390</u>	<u>2,096,186</u>	<u>2,723,050</u>	<u>3,313,982</u>
Potential savings	<u>\$163,647</u>	<u>\$ 363,226</u>	<u>\$ 598,738</u>	<u>\$ 870,182</u>	<u>\$1,177,558</u>

<sup>a</sup>Appendix I shows lease costs for a 5-year period for each of the three systems.

<sup>b</sup>Based on most favorable lease terms quoted by one of the three commercial leasing firms consulted during our review.

Regarding equipment utilization, there is an estimated maximum of 720 hours a month (30 days x 24 hours) of available computer time. During normal operations, computer time is used for (1) machine processing of data and testing of programs, (2) setting up and preparing machines for data processing operations, and (3) preventive and remedial maintenance. On the basis of GPO's 1968 usage data, we estimate that the maximum available machine processing time for the equipment in use at the GPO is about 434 hours a month.

The calculation of costs and potential savings in the preceding tabulation is based on the minimum IBM rental charges which allow for machine processing time of 176 hours a month. This amounts to about 40 percent of the 434 hours estimated to be available at GPO. Although GPO cannot predict the amount of machine processing time required for future operations, prior usage rates and increasing requirements indicate that machine utilization will probably exceed the 40-percent rate used in this calculation.

Rental charges for ADP equipment leased from IBM increase as equipment usage increases, whereas the rental charges by the commercial leasing firm provide for unlimited usage. Accordingly, the potential savings to GPO associated with leasing ADP equipment from a commercial leasing firm become greater as the rate of utilization of the equipment increases beyond 40 percent. For example, if like equipment, leased from a commercial leasing firm, were retained for 5 years and utilized at a rate of 75 percent (326 hours), the potential savings would increase to \$1.5 million; if the equipment were utilized at a rate of 100 percent (434 hours), the potential savings would increase to \$1.6 million.

An official of a commercial leasing firm advised us that his firm could provide IBM 360 computer systems similar to those used by GPO for an initial lease period of 1 year. Upon expiration of the lease, the Government would have the option of renewing the lease for another year or returning the equipment upon 30 to 60 days' notice to the commercial leasing firm. The same arrangement would continue from year to year. We were advised also that the

lease could include an option to purchase the equipment at terms to be established during lease negotiations.

Maintenance services for equipment acquired from the commercial leasing firm would be provided by IBM under a separate contractual agreement. The cost of these services has been included in our calculations. From January 1, 1970, IBM's technical support--consisting of assistance in the installation and use of IBM data processing equipment, use of IBM-developed programs, and classroom training for GPO employees--for IBM equipment costs the same regardless of whether the equipment is leased from IBM or from a commercial leasing firm. Prior to January 1, 1970, technical support for equipment rented from IBM was available at no charge.

#### PURCHASING EQUIPMENT FROM THE MANUFACTURER

We compared the cost of leasing versus purchasing for each of the three ADP systems over a 5-year period which began July 1, 1969. We based this comparison on the cost of leasing the systems from a commercial leasing firm since that cost was considerably less than the cost of leasing from IBM. (See p. 10.) Our comparison showed that the break-even point for the IBM 360/40 system would not be reached until 3 years and 11 months after purchase. Break-even points for the first and second IBM 360/50 systems require longer periods, 4 years and 5 months and 7 years and 1 month, respectively. The extent of equipment utilization was not a factor to this comparison because the commercial leasing firm rentals remained fixed regardless of utilization. Maintenance costs for increased utilization would be the same under both of the above methods of acquisition. Our calculations are summarized below.

<u>Period</u>	<u>Estimated cumulative savings or additional loss (-) if leased from a commercial leasing firm rather than purchased</u>			
	<u>IBM 360/40</u>	<u>IBM 360/50</u>	<u>IBM 360/50</u>	<u>Total</u>
First year	\$ 73,037	\$130,775	\$463,290	\$667,102
Second year	64,501	134,239	482,806	681,546
Third year	43,227	101,821	464,066	609,114
Fourth year	-6,056	47,498	420,860	462,302
Fifth year (note a)	-68,077	-56,117	326,389	202,195
Estimated break-even point	3 yrs.,	4 yrs.,	7 yrs.,	5 yrs ,
(after July 1, 1969)	11 mo	5 mo	1 mo	7 mo

<sup>a</sup>Details are included as appendix II



This analysis shows that costs to lease all three systems from a commercial leasing firm for the 5-year period are substantially less than the cost to purchase the three systems. This financial advantage, however, decreases rapidly as each system nears its respective break-even point.

#### ACQUIRING EQUIPMENT BY A COMBINATION OF METHODS

Our review showed that GPO could significantly reduce its costs by either purchasing or leasing from a commercial leasing firm and retaining for 5 years ADP equipment comparable to that which GPO was leasing or planning to lease from IBM as of July 1, 1969. The purchase alternative offers the greatest savings provided the equipment is retained beyond the break-even point. However, if the equipment is disposed of prior to the break-even point GPO could incur additional costs. Leasing the equipment from a commercial leasing firm would reduce GPO's costs even if the equipment is retained for only 1 year.

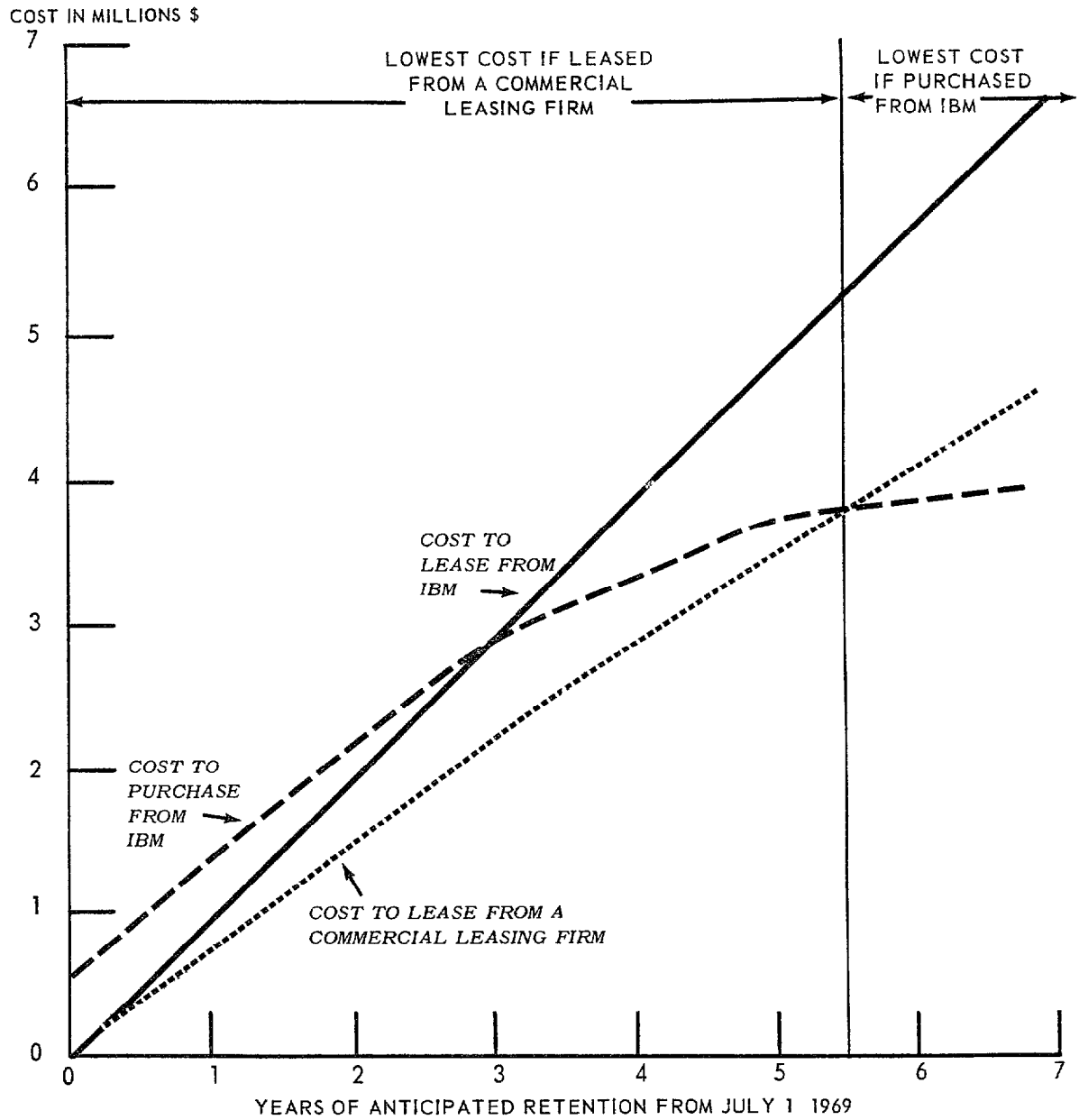
Since the break-even points of the individual computer systems vary from about 4 years to about 7 years, it may be that the most economical method of acquisition is a combination of the alternative methods discussed in this report. For example, if the three ADP systems in operation during 1969 were to be retained for 5 years, the most economical method of acquisition would have been to purchase the first two systems and lease the third system from a commercial leasing firm. We estimate that GPO, by using this combination of methods of acquisition, could reduce its costs by \$1.3 million, as shown below.

Estimated cumulative savings for a 5-year period based on rates in effect on July 1, 1969			
<u>System</u>	<u>Lease from commercial leasing firm</u>	<u>Purchase from IBM</u>	<u>Most favorable method</u>
360/40	\$ 268,285	\$336,362	\$ 336,362
360/50	459,071	515,187	515,187
360/50	<u>450,202</u>	<u>123,814</u>	<u>450,202</u>
Total	<u>\$1,177,558</u>	<u>\$975,363</u>	<u>\$1,301,751</u>

Although the above comparison shows that substantial savings could have been effected over a 5-year period by using a combination of acquisition methods, the financial advantages of purchasing ADP equipment are dependent upon the retention of the equipment beyond the break-even point. As previously noted, however, GPO believes that it cannot predict its long-term equipment requirements.

The relationship of break-even point to cost is further illustrated in the following graphic comparison of the costs which would be incurred under each method of acquisition for the three systems combined. This graph shows the short-term financial advantage of leasing from a commercial leasing firm and the long-term advantage of purchasing. It shows also that, regardless of the anticipated retention period, leasing from the equipment manufacturer is not the most economical method of acquisition.

COMPARISON OF THE ESTIMATED COST OF ALTERNATIVE METHODS OF  
ACQUIRING AUTOMATIC DATA PROCESSING EQUIPMENT



## CHAPTER 4

### AGENCY ACTION, GAO CONCLUSIONS, AND RECOMMENDATIONS

#### AGENCY ACTION

During our review, GPO contacted three computer-leasing firms by telephone and requested information on their leasing practices. GPO officials advised us that no further action was taken because the leasing firms contacted either did not respond to GPO's request for information or could not meet its requirements. The leasing firms contacted did not, however, include one of the major firms which had advised us of its interest in leasing ADP equipment to Government agencies.

Upon further discussion of this matter with GPO officials, we were advised that they would give further consideration to the feasibility of acquiring ADP equipment from a commercial leasing firm. We were advised also that GPO would consider purchasing ADP equipment whenever predictable retention periods were long enough to make such purchases practicable. In response to our request for comments on the draft of this report, the Public Printer advised us that GPO would consider and adequately document all pertinent factors in connection with its future acquisition of ADP equipment. (See app. III.) At his suggestion, we discussed the content of the draft report with the Comptroller of GPO and made appropriate revisions to the report, including verbatim statements of GPO's objections to the use of commercial leasing firms. (See p. 8.)

The Public Printer also noted that the repeal of the 7-percent investment credit and the lowering of basic rental prices by IBM had left the leasing market in a state of mild confusion. We believe that these items are not of sufficient significance to nullify the estimated savings. Our computations are based upon the leasing of equipment from the commercial leasing firm's inventory on which the investment credit benefits probably had been realized at the time of acquisition. The reduction in IBM's lease rates for fiscal year 1970 amounted to 3 percent, which is not large enough to appreciably reduce the estimated savings.

## CONCLUSIONS

We believe that the short-term lease arrangements currently offered by commercial leasing firms offer GPO the opportunity for substantially reducing its cost of leasing ADP equipment while retaining the flexibility to upgrade the equipment. In addition, although our computations indicate that the potential savings would be greater if the two computer systems obtained in October 1965 and June 1967 had been purchased on July 1, 1969, and retained for at least 5 years, this alternative method of procurement does not appear to be feasible unless GPO finds that it has a long-term requirement for this equipment. In view of the financial advantages of leasing from commercial leasing firms or purchasing the equipment if a sufficient retention period can be established, we believe that the continuation of GPO's practice of leasing from the equipment manufacturer will result in additional costs and that steps should be taken to change this practice at the earliest practicable date.

Any change of ADP equipment at GPO would require careful planning and tight scheduling to minimize the effect of such a changeover upon operations. We believe that this could be accomplished effectively by GPO with the cooperation of the equipment manufacturer and commercial leasing firms.

## RECOMMENDATIONS TO THE PUBLIC PRINTER

We recommend that the Public Printer establish internal procedures to ensure that acquisitions of ADP equipment, by purchase, new lease, or renewals of existing lease, will be based on an adequate analysis of the relative merits of all alternative sources of supply. We recommend also that, regarding the ADP equipment which was being leased by GPO at the time of our review, anticipated requirements be reevaluated to determine whether reasonably accurate retention periods can be established that will justify direct purchase of any of the equipment. We recommend further that, for the ADP equipment for which direct purchase is not found to be feasible, the lease terms and ADP equipment available from commercial leasing firms be fully explored with a view toward leasing the equipment at the most economical and

advantageous terms obtainable. We also suggest that appropriate consideration be given to recent improvements in computer equipment produced by various manufacturers.

## CHAPTER 5

### SCOPE OF REVIEW

Our review was directed toward an evaluation of the feasibility and cost of acquiring ADP equipment by purchase or lease from the manufacturer or by lease from a commercial leasing firm. We examined statements of policy and guidance issued to Federal agencies by the Office of Management and Budget and GSA for the acquisition of ADP equipment. In addition, we examined records relevant to GPO's acquisition and operation of ADP equipment and held discussions with officials of GPO, IBM, and three commercial leasing firms. We also obtained cost estimates from the commercial leasing firms and compared the costs from the most favorable estimate with the costs that would be incurred by GPO in purchasing or leasing ADP equipment from the manufacturer.

## APPENDIXES



COMPARISON OF ESTIMATED COST OF LEASING ADP EQUIPMENT  
FROM IBM TO THE ESTIMATED COST OF LEASING  
FROM A COMMERCIAL LEASING FIRM  
OVER A 5-YEAR PERIOD BASED ON RATES IN EFFECT ON JULY 1, 1969  
(notes a and b)

	<u>Computer system</u>			<u>Total</u>
	<u>IBM 360/40</u>	<u>IBM 360/50</u>	<u>IBM 360/50</u>	
Cost to lease from IBM (note c)	\$1,030,440	\$1,753,260	\$1,707,840	\$4,491,540
Cost to lease from a leasing firm (note d)	<u>762,155</u>	<u>1,294,189</u>	<u>1,257,638</u>	<u>3,313,982</u>
Savings if leased from a leasing firm (note e)	\$ <u>268,285</u>	\$ <u>459,071</u>	\$ <u>450,202</u>	\$ <u>1,177,558</u>

<sup>a</sup>Cost computations are based on equipment utilization of 176 hours a month covered by the minimum IBM rental charges, which is equivalent to 40 percent of available machine processing time.

<sup>b</sup>Certain components for which IBM charges a basic annual rental of \$13,920 (1.5 percent of the total rentals) are not available from the commercial leasing firm and are not included in this comparison.

<sup>c</sup>Costs are based on the rates for equipment rental and maintenance cited in the fiscal year 1969 Authorized Federal Supply Schedule Price List Contract GS-00S-76158 under which GPO leased the equipment.

<sup>d</sup>Costs, including estimated IBM maintenance charges, are based on information obtained from a commercial leasing firm.

<sup>e</sup>We computed the estimated savings on the basis of the present value method and found no significant difference in the results.

## APPENDIX II

COMPARISON OF ESTIMATED COST OF PURCHASING ADP EQUIPMENT  
FROM IBM TO ESTIMATED COST OF LEASING FROM A COMMERCIAL LEASING FIRM  
OVER A 5-YEAR PERIOD (note a)

	Computer system			Total
	IBM 360/40	IBM 360/50	IBM 360/50	
Purchase price at July 1, 1969 (note b)	\$567,665	\$1,016,572	\$1,308,120	\$2,892,357
Interest on purchase price to June 30, 1974 (note c)	117,007	209,259	267,170	593,436
Maintenance costs to June 30, 1974 (note d)	<u>71,760</u>	<u>119,505</u>	<u>113,385</u>	<u>304,650</u>
Total purchase costs	756,432	1,345,336	1,688,675	3,790,443
Less total estimated rental costs to June 30, 1974 (note e)	<u>762,155</u>	<u>1,294,189</u>	<u>1,257,638</u>	<u>3,313,982</u>
Savings or loss(—) if acquired from a commercial leasing firm exclusive of estimated residual value at June 30, 1974	-5,723	51,147	431,037	476,461
Less estimated residual value at June 30, 1974 (note f)	<u>62,354</u>	<u>107,264</u>	<u>104,648</u>	<u>274,266</u>
Savings or loss(—) if acquired from a commercial leasing firm (note g)	<u>\$-68,077</u>	<u>\$-56,117</u>	<u>\$ 326,389</u>	<u>\$ 202,195</u>

<sup>a</sup>Certain components having an estimated purchase price of \$37,668 (1.3 percent of all equipment) are not available from the commercial leasing firm and have been excluded from the cost comparisons.

<sup>b</sup>Purchase price is the gross purchase price shown in the fiscal year 1969 Authorized Federal Supply Schedule Price List Contract GS-00S-76158 less estimated credits for the rentals paid from the date of installation to June 30, 1969

<sup>c</sup>Interest is a cost which is related to all Government expenditures. In our calculations, we have used the average yield (6 percent) of Treasury obligations with approximately 5 years remaining to maturity as of February 1969--Bureau of the Budget Circular No. A-54, revised

<sup>d</sup>Maintenance costs are based on IBM prime-shift maintenance charges as shown in fiscal year 1969 Authorized Federal Supply Schedule Price List Contract GS-00S-76158.

<sup>e</sup>Estimated rental costs, including estimated IBM maintenance charges, were furnished to us by a commercial leasing firm.

<sup>f</sup>Estimated residual values at June 30, 1974, were obtained from a broker of used ADP equipment.

<sup>g</sup>We also computed the estimated savings on the basis of the present value method and found no significant difference in the results.



OFFICE OF THE  
PUBLIC PRINTER

## UNITED STATES GOVERNMENT PRINTING OFFICE

WASHINGTON, D C 20401

January 23, 1970

Mr. Irvine M Crawford,  
Assistant Director  
Civil Division  
U.S. General Accounting Office  
Washington, D. C. 20548

Dear Mr. Crawford

Reference is made to your letter of December 12, 1969, forwarding for review and comment a copy of your proposed report to the Congress on the opportunity to reduce expenditures at the Government Printing Office by acquiring automatic data processing equipment from commercial leasing firms.

The major portion of the report is devoted to a recitation of the past policies followed by this Office in the acquisition of automatic data processing equipment. Some of this material is inaccurate and I suggest that you meet with our Comptroller to resolve those areas. He will be happy to meet with you at your convenience. (See GAO note.)

The main thrust of your report, however, concerns the future actions of this Office regarding the acquisition of automatic data processing equipment and recommends that the Public Printer

1. Establish internal procedures requiring that all future acquisitions of ADP equipment be based on an adequate analysis of the relative merits of all sources of supply including commercial leasing firms.
2. Reevaluate the future ADP equipment requirements to determine if reasonably accurate retention periods can be established to justify direct purchase of the equipment presently installed at GPO.
3. Fully explore the lease terms and conditions currently offered by commercial leasing firms with a view toward using this method to acquire ADP equipment for which the estimated retention period is insufficient to justify purchase.

GAO note: Our representatives met with the Comptroller and appropriate changes were made to the report.



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APPENDIX III

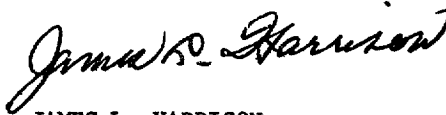
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This Office, in general, followed the course of action outlined in your recommendations, although I must admit that the degree of formality and documentation which your Office generally expects has either been inadequate or missing. Steps have been taken to correct this situation and all future decisions concerning the acquisition of automatic data processing equipment will be adequately documented.

As you know, the repeal of the seven percent investment credit, the lowering of basic rental prices by I.B.M. together with separate charges for support services, and other factors have left the leasing market in a state of mild confusion. We will, however, follow these developments closely and consider and adequately document all pertinent factors in connection with our acquisitions of automatic data processing equipment.

Thank you for allowing us to comment on your draft report.

Sincerely yours,

A handwritten signature in cursive script, reading "James L. Harrison".

JAMES L. HARRISON  
Public Printer

PRINCIPAL OFFICIALS OF  
THE GPO RESPONSIBLE FOR THE ADMINISTRATION OF  
THE ACTIVITIES DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
PUBLIC PRINTER:		
A. N. Spence	Apr. 1970	Present
James L. Harrison	Mar. 1961	Mar. 1970
DEPUTY PUBLIC PRINTER:		
James W. Tew	Nov. 1969	Present
Harry D. Merold	Mar. 1961	Oct. 1969
ADMINISTRATIVE ASSISTANT TO THE PUBLIC PRINTER:		
Harry J. Humphrey	Jan. 1966	Present
Felix E. Cristofane	Mar. 1961	Dec. 1965
COMPTROLLER:		
Walter C. DeVaughn	May 1968	Present
Earl M. Cragg	Jan. 1967	Apr. 1968
Frank Higginbotham	Apr. 1961	Jan. 1967